REMARKS

Claims 1-4, 6-8, 10-14, and 24-26 are now pending in the application. Claims 5, 9, and 15-23 are cancelled. Claims 24-26 are new. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato et al (U.S. App. No. 2003/0132665 A1) in view of Gazzard (U.S. App. No. 2004/0037239 A1). This rejection is respectfully traversed.

Claim 1 and 6-8 are amended. Claims 5 and 9 are cancelled. Claim 1 recites, among other limitations,

> wherein the electronic compass module includes:
> an X-axis magnetic sensor and a Y-axis magnetic sensor for generating an X-axis magnetic senor output signal and a Y-axis magnetic sensor output signal depending on variations in an X-axis and a Y-axis component of the external geomagnetic field, respectively;
> an analog/digital converter (ADC) for receiving the X-axis and/or the Y-axis magnetic sensor signal and converting received signal into a digital signal; and
> a compensation processor for receiving the digital signal from the ADC, determining whether or not a compensation of the digital signal is required, performing the compensation of the digital signal if the compensation is determined to be required, and transferring compensated digital signal to the microprocessor,
> wherein the compensation processor determines that the compensation is required when the received digital signal has a value greater than a predetermined threshold value.

Applicant submits that the cited references, individually or in combination, fail to teach or suggest the above limitations.

Claim 1 is directed to an X-axis magnetic sensor and a Y-axis sensor that output signals depending on variations in an X-axis and a Y-axis component of the external geomagnetic field respectively. Embodiments of the claimed invention can output a sensor output signal that is in proportion to a magnitude change of the external field. See, e.g., para. [0060]. One of ordinary skill in the art would appreciate that such a variation corresponds to a rotation angle. See, e.g., para. [0054].

Kato at best appears to disclose magnetic sensors that output signals in proportion to the magnitude of the geomagnetic field, see, e.g., Kato, paras. [0085]-[0086], rather than the variations of the magnitude. Kato at best appears to disclose that the CPU (21) calculates a lateral or vertical rotation change angle by subtracting a stored reference angle value from an angle value at a present time, Kato, para. [0103], rather than that a rotation angle value is directly derived from a sensor output signal.

Claim 1 is further directed to a compensation processor that determines whether or not a compensation of the digital signal is required based on a predetermined threshold value. Because an output sensor signal is generated depending on variations of the magnitude of the external geomagnetic field, the value of the digital signal, converted from the output sensor signal by the ADC and corresponding to a rotation angle, can be negative or greater than a predetermined threshold value, such as 360 degree. The compensation processor determines if the value of the digital signal is greater than the predetermined threshold value and further performs the compensation function if required. See, e.g., para. [0054]. Kato at best appears to disclose a logic that assumes the range of use condition of the cellular phone (10) is such that the azimuth angle falls within a range of 0 to 360 degree. The magnetic sensors of Kato

generate sensor signals based on the magnitude of the geomagnetic field. The logic only interprets the value of sensor signals as corresponding to an azimuth angle that is within the range of 0 to 360 degree, by its definition. Therefore, no compensation processor is needed in Kato, since the azimuth angle is always within the predetermined range. In contrast, the digital signal of claim 1, based on the variation of the magnitude of the geomagnetic field and corresponding to a rotation angle, can be out of the predetermined range. Therefore, the compensation processor of the claimed invention performs the compensation of the digital signal if the compensation is determined to be required.

In view of the foregoing, Applicant submits that claim 1 and its dependent claims 2-4, 6-8 and 10-14 define over the art cited by the Examiner.

Claims 15-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kato et al (U.S. App. No. 2003/0132665 A1). This rejection is respectfully traversed.

Applicant has cancelled claims 15-23 and thus this rejection is rendered moot. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

NEW CLAIMS

Claims 24-26 are new. Claim 24 is similarly defined as claim 1. For example, claim 24 is directed to 1) a magnetic sensor for outputting a sensor output signal proportional to a change in magnitude of the external geomagnetic field and 2) an analog/digital converter (ADC) for receiving the sensor output signal and converting received signal into a digital signal representing a rotation angle of the mobile

communication terminal. Therefore, Applicant submits that claim 24 and its dependent claims 25-26 define over the art cited by the Examiner for one or more of the reasons set forth regarding claim 1.

DOUBLE PATENTING

Claims 1 and 15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 18 of copending Application No. 10/571,966. This rejection is respectfully traversed.

Notwithstanding the foregoing, submitted as an attachment to this Response is a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c) which overcomes instant rejection. Accompanying the Terminal Disclaimer is the requisite fee under 37 C.F.R. § 1.20(d).

The Terminal Disclaimer simply serves the statutory function of removing the rejections of double patenting and raises neither a presumption nor an estoppel as to the merits of the Examiner's rejection. The Terminal Disclaimer should ***not*** be considered as an admission, acquiescence or estoppel as to the merits of the rejection and doing so would be improper. *Ortho Pharmaceutical Corp. v. Smith,* 22 U.S.P.Q.2d 1119, 1124 (Fed. Cir. 1992); *Quad Envtl. Tech. Corp. v. Union Sanitary Dist.*, 20 U.S.P.Q.2d 1392 (Fed. Cir. 1991). Consequently, Applicant respectfully requests that this rejection be reconsidered and withdrawn.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: March 19, 2008

By: _____

G. Gregory Schivley
Reg. No. 27,382
Bryant E. Wade
Reg. No. 40,344

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

GGS/BEW/PFD/evm